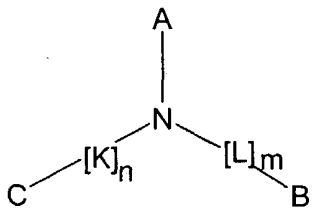
Claims

We claim

1. Building block for preparing C-terminally labelled peptides by solid phase peptide synthesis according to formula I

I 

wherein

A is a functionality for the attachment to a solid support or a functionality already comprising a solid support

B is a functionality for the attachment of one or more amino acid or peptides or a functionality already comprising one or more amino acids or peptides

C is a functionality for the attachment of one or more labels or a functionality already comprising one or more labels,

K and L are independently from one another a linear or branched, substituted or unsubstituted alkyl chain with at least two C-atoms, whereby one or more non-neighbouring C-atoms might be substituted by O, NH, N-(C1-C6)Alkyl, N-(C5-C15)Aryl, S, a carbonyl group, ester group or an amide group and/or neighbouring C-atoms might be connected via a double or triple bond.

m, n are 0 or 1, whereby m + n is at least 1.

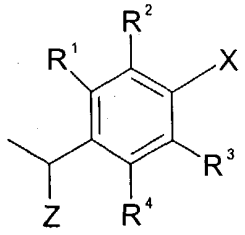
2. Building block according to claim 1, wherein B is an amino protecting group or a protected amino group

3. Building block according to claim 1, wherein C comprises one or more labels.

4. Building block according to claim 1, wherein m + n is 1.

5. Building block according to claim 1, wherein K and L are independently from one another C2-C8-alkyl or $-(O-CH_2-CH_2-)_q-$ with q = 1 to 20.

6. Building block according to claim 1, wherein A is a residue according to formula II

II 

whereby

R^1, R^2, R^3 and R^4 independently from one another are H, C1-C8 alkyl, C1-C8 alkoxy, C5-C18 aryl or heteroaryl or C5-C18 aryloxy or heteroaryloxy,

X is a functionality for attachment to the solid support or a functionality already comprising a solid support.

Z is H, C1-C8-alkyl, C5-C20 aryl or C5-C20 heteroaryl.

7. Building block according to claim 6, wherein X is a residue according to formula III

III $- D - R^5 - E$

with

D being CH_2, S, NH or O

R^5 being C1-C10 alkyl

E being COOH, OH, SH, NCS, NCO, NH_2, halide (Cl, Br, I) or the solid support.

8. Method for preparing C-terminally labelled peptides using a building block according to claim 1 by

a) optionally loading the building block on a solid support

b) stepwise conjugating one or more amino acids to functionality B

c) removing the protecting group of functionality C

d) attaching the label to the reactive group deprotected in step c)

e) optionally deprotecting the amino protecting group of the N-terminal amino acid and attaching a label to said amino group

f) optionally cleaving the C-terminally labelled peptide from the solid support.

9. Method for preparing C-terminally labelled peptides using a building block according to claim 3 by

a) optionally loading the building block comprising one or more labels on a solid support

b) stepwise conjugating one or more amino acids to functionality B

c) optionally deprotecting the amino protecting group of the N-terminal amino acid and attaching a label to said amino group

d) optionally cleaving the C-terminally labelled peptide from the solid support.